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COUNTRY ANALYSIS BRIEFS

Central America

Last Updated: November 2007

Background

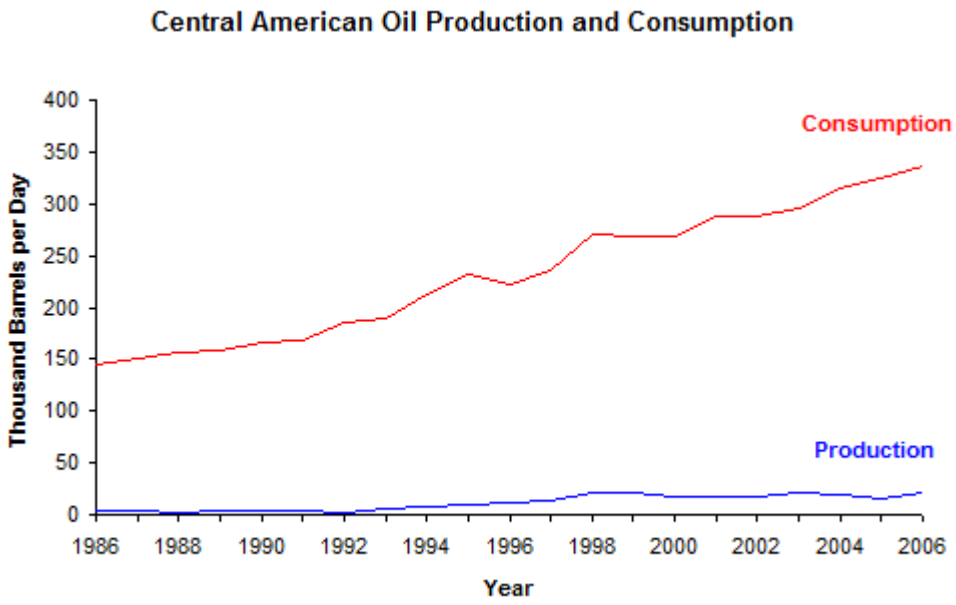
Although Central America has limited energy resources, it is important to world energy markets as a transit center for oil via the Panama Canal and as a potential energy transit center between North and South America.

With hardly any domestic hydrocarbon reserves, Central American countries rely heavily on imported oil for their energy needs. The countries of Central America, including Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama, have traditionally been dependent upon agricultural exports for a large portion of their economic activity. However, in recent years, these countries have begun to diversify their economies towards manufacturing and tourism. As a result, the countries have been especially affected by high world oil prices in recent years. Partially offsetting this, many have been able to secure preferential pricing for oil from Venezuela and Mexico. Central America does have a large amount of installed hydroelectric capacity, but the region still relies upon imports for some three-fourths of its total energy consumption. Despite the lack of sizable oil reserves, Central America remains an important transit center for oil via the Panama Canal and as a potential energy transit center between North and South America.

Oil

Guatemala and Belize are Central America's only oil producers, with both producing small amounts of oil.

Guatemala and Belize are the only oil-producing countries in Central America, averaging 20,100 barrels per day (bbl/d) and 2,600 bbl/d, respectively in 2006. During that same period, Central America consumed an estimated 340,000 bbl/d of oil. Increasing numbers of oil- and diesel-fired power plants and robust economic growth have caused Central American oil consumption to double in the last two decades. In 2006, Panama was the largest oil consumer in the region (93,000 bbl/d), while Belize was the smallest consumer (7,000 bbl/d).



Source: EIA International Energy Annual

Exploration and Production

Belize

In January 2006, first oil from Belize Natural Energy's (BNE) Spanish Lookout came online at 1,000 bbl/d, later reaching 2,600 bbl/d. Because Belize currently does not have an oil refinery, the country exports the oil to neighboring countries for processing, with the United States receiving the majority of these exports. Additional onshore and offshore exploration continues in the country.

Guatemala

According to *Oil and Gas Journal (OGJ)*, Guatemala contained an estimated 83 million barrels of proven oil reserves in 2007. Most of the country's oil production occurs in its northern jungles, adjacent to the border with Mexico. However, the government planned to hold a licensing round in 2007-2008 that would include acreage in the offshore Pacific basin. France-based Perenco produces the majority of oil in the country. Due to a lack of domestic refining capacity, almost all of their production is exported to the United States, and the country must import petroleum products. In 2006, the United States imported an average of 15,000 bbl/d of crude oil from Guatemala.

Other Countries

In June 2007, U.S.-based Harken Energy reportedly concluded an exploration agreement in Panama, covering offshore areas in the Gulf of San Miguel. This follows an earlier seismic exploration program by the company in Costa Rica. In 2007, Nicaragua conducted a licensing round for offshore blocks in the Caribbean and the Pacific basins. In February 2007, Norwood Resources reported that it had made a successful discovery at an onshore exploration well.

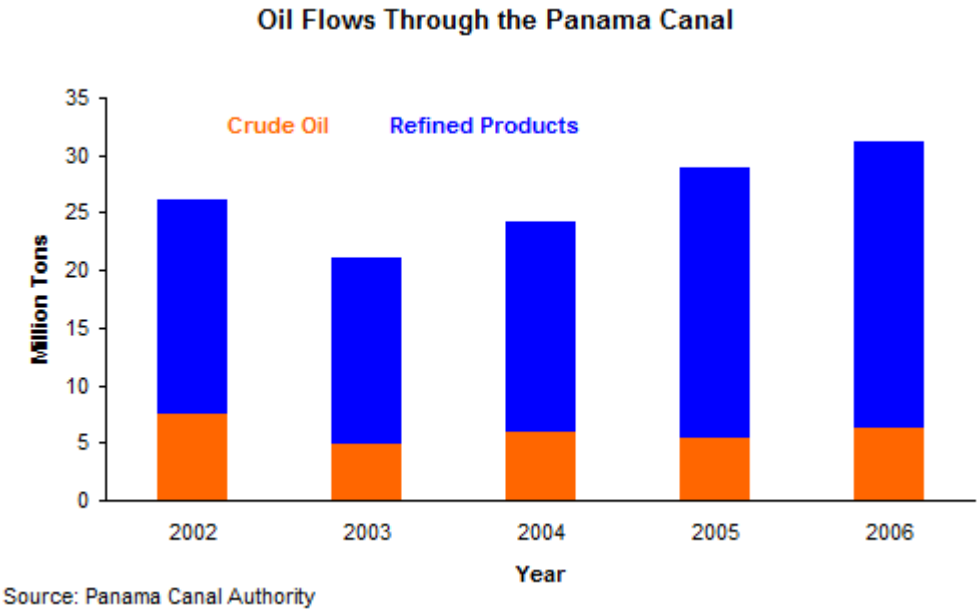
Oil Transport Infrastructure

Panama Canal

In 2006, approximately 600,000 bbl/d of crude oil and petroleum products passed through the Panama Canal, mostly consisting of petroleum coke. Petroleum shipments represented about 15 percent of total canal traffic in 2006. About 60 percent of petroleum shipments go from the Caribbean to Pacific Ocean.

The relevance of the Panama Canal to the global oil trade has diminished, as many modern tankers are too large to travel through the canal. Some oil tankers, such as ultra-large crude carriers (ULCC), can be nearly five times larger than the maximum capacity of the canal. In October 2006, the Panamanian people overwhelmingly approved an expansion of the canal that would increase transit volume and almost double the current maximum size of ships able to use the canal. The expansion could cause an increase in energy flows through the canal. It is unlikely that oil flows would increase dramatically, as many oil tankers would still be unable to use the

canal. On the other hand, the expansion would open the new possibility of using the canal to transport liquefied natural gas (LNG), as almost all existing LNG tankers are too large to use the canal as it now stands. In addition, the expansion could allow greater flows of coal from South America, especially Colombia, into the Pacific Rim.



Source: Panama Canal Authority

Petroleum Export Zones

In 1992, the Panamanian government created the Petroleum Export Zones (ZLP). Within these zones, all petroleum activities are exempt from all taxes and many regulations. Due to the large amount of shipping traffic in the area, the marine fuel industry (bunkering) has been the largest investor in the ZLP program. Currently, there are eight ZLP areas in Panama, including the international airport outside Panama City and seven marine terminals.

Trans-Panama Pipeline

As mentioned above, many crude oil carriers are too large to fit through the Panama Canal. To remedy this situation, a joint venture of the Panamanian government and U.S.-based Northville Industries built the Trans-Panama Pipeline (TPP) in 1982. The original purpose of the TPP was to facilitate crude oil shipments from Alaska's North Slope to refineries in the Caribbean and U.S. Gulf Coast regions. The idea was for very large crude carriers (VLCC) (ships too large to transit the canal) to offload Alaskan crude on the Pacific side, then move the crude oil to another VLCC waiting on the Atlantic side. However, in 1996, the 800,000-bbl/d TPP was shut down, as oil companies began shipping Alaskan crude along alternative routes.

Since 1996, there have been intermittent requests and proposals to utilize the TPP. For example, EnCana shipped small volumes of Ecuadorian oil through the system in 2003. In 2005, Venezuela reportedly began talks about using the pipeline to facilitate oil exports to China.

Other Pipelines

In January 2003, U.S.-based Phenix Pipeline and Oleoductos Premier de Nicaragua announced plans to build the 280-mile Central American Pipeline Project to transport petroleum products between the Pacific and Atlantic coasts. In 2007, Phenix stated that the project would move forward, at an estimated cost of $750 million.

Downstream

According to *OGJ*, only Nicaragua, El Salvador, and Costa Rica have operating crude oil refining capacity in Central America. The countries each operate a single facility, with total crude oil refining capacity for the three of 66,000 bbl/d. Panama and Guatemala had previously operated refineries as well, but closed these facilities in 2002.

Refining Capacity in Central America

Country	Facility	Capacity (bbl/d)
Costa Rica	Limon	24,000
El Salvador	Acajutla	22,000
Nicaragua	Managua	20,000
Source: Oil and Gas Journal		

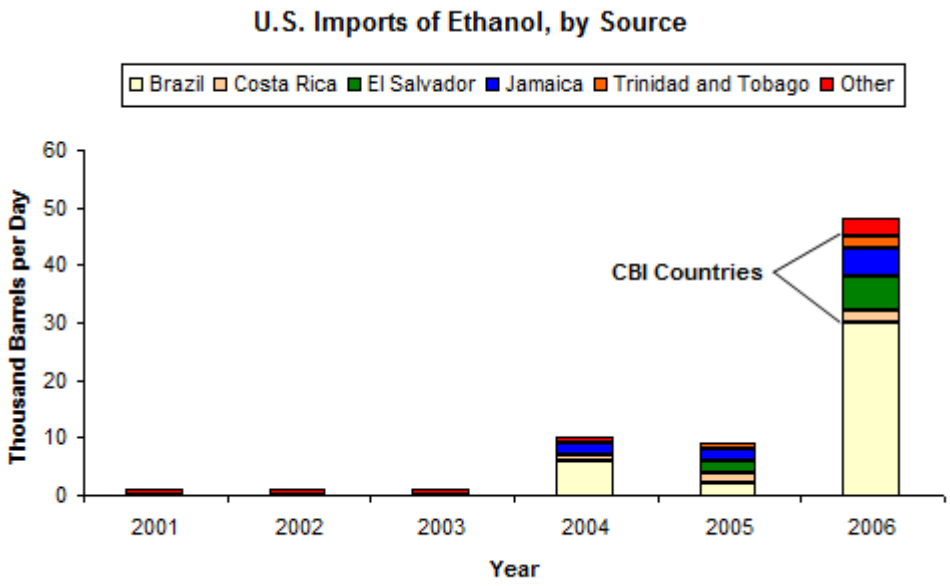
Proposals for New Refineries in the Region

There have been numerous proposals to build additional refineries in the region. Potential locations include Costa Rica, Guatemala, Panama, and Nicaragua. The proximity of the region to the U.S. market is the principle driver behind these projects. However, much of refined products produced would supply domestic markets. In July 2007, work began on the 150,000-bbl/d Sandino-Bolivar refinery in Nicaragua. The project, a joint venture between Nicaragua and Venezuela, will cost an estimated $4 billion.

Three separate groups have announced plans to build refining capacity in Panama. A consortium of Qatar Petroleum and Occidental Petroleum signed a memorandum of understanding (MOU) with the Panamanian government to build a 350,000-bbl/d refinery on the Pacific coast, with an estimated cost of $7 billion. The facility would likely be built in proximity to the TPP, meaning that it could easily source crude oil supplies from either the Pacific or Caribbean markets. On the Caribbean coast, there have been two separate proposals for new refinery projects. PdVSA has proposed to build a 150,000-bbl/d refinery in Colon, Panama. A consortium of U.S. and European companies has proposed a 250,000-bbl/d refinery, also in Colon.

Ethanol

Central America is emerging as an important producer of ethanol, mostly oriented for export to the United States. Under the Caribbean Basins Initiative (CBI), Central American and Caribbean countries are permitted to export certain volumes of ethanol to the U.S. duty-free, thereby avoiding the usual $0.54 per gallon tariff on U.S. ethanol imports. In general, the cap on duty-free ethanol imports from CBI countries is seven percent of total U.S. ethanol consumption, or about 25,000 bbl/d in 2006, though there are different rules depending upon the origin of the sugarcane feedstock and the level of processing that actually occurs in the region.



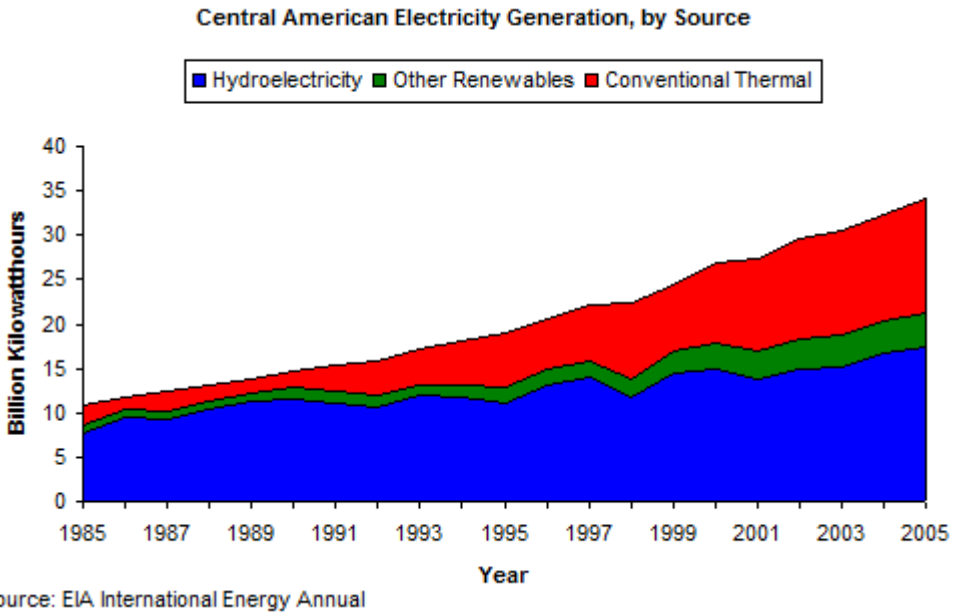
Source: EIA

In 2006, four countries covered by the CBI (Costa Rica, El Salvador, Jamaica, and Trinidad and Tobago) exported 15,000 bbl/d of ethanol to the U.S., with El Salvador representing half of this total. The American Renewable Fuel Suppliers (ARFS) operates a 3,900-bbl/d ethanol plant in El Salvador, near the port of Acajutla. In May 2007, the International Finance Corporation (IFC) considered a funding request by Pantaleon Sugar for a 1,200-bbl/d ethanol plant in Guatemala, near Guatemala City.

Electricity

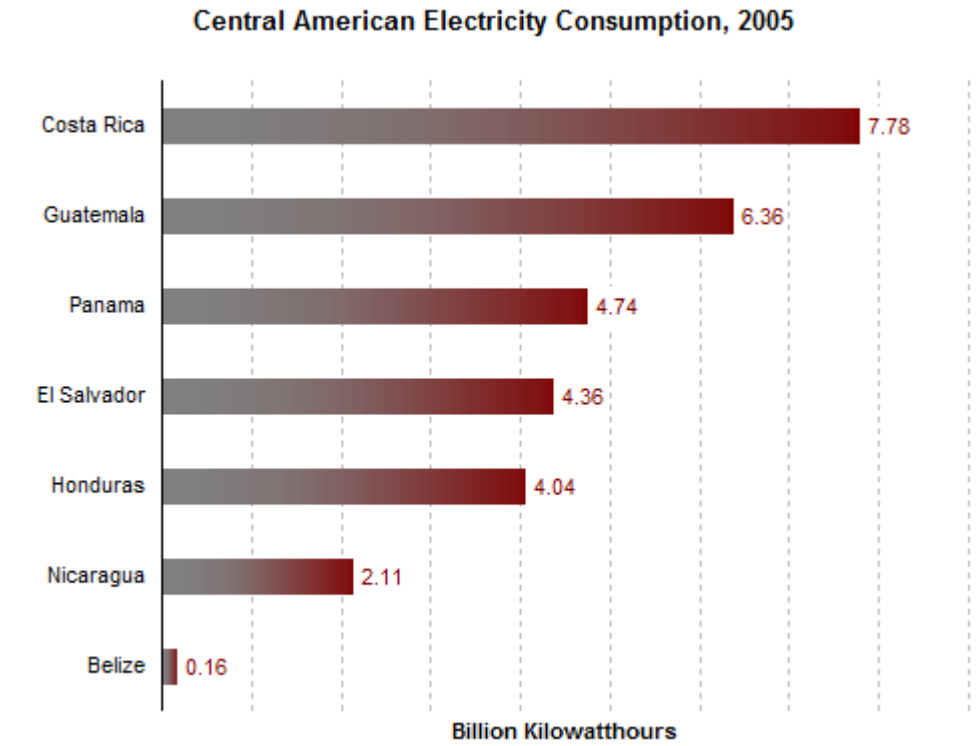
Central America generates the bulk of its electricity from hydropower.

In 2005, Central America had total installed electricity generating capacity of 8.5 gigawatts (GW), mostly consisting of hydroelectric stations. Power consumption and generation in Central America have grown rapidly in recent years, spurred on by economic expansion and increased electrification of many rural areas. In 2005, the region generated 34.2 billion kilowatthours (Bkwh) of electricity and consumed 29.5 Bkwh, both about 80 percent higher than a decade ago. The largest consumer of electricity in the region is Costa Rica (7.8 Bkwh), while the smallest is Belize (0.2 Bkwh).



Source: EIA International Energy Annual

Hydropower has historically dominated electricity generation in Central America, representing 51 percent of total electricity generation in 2005. However, conventional thermal capacity has become increasingly important. Facing energy shortages in the mid-to-late 1990s, Central American countries began privatizing their energy markets, allowing foreign investors to develop new power plants. Many of the new power plants are conventional thermal types, as construction time is shorter than hydropower plants. Thermal power plants also offer increased independence from the cyclical, seasonal nature of hydropower production. As a result, thermal generation, especially powered by oil products, has been growing faster than hydropower generation.



Source: EIA International Energy Annual

Energy Integration

In December 2001, the seven Central American countries signed the Plan Puebla-Panama (PPP), an effort to better integrate the infrastructure of the region, with particular focus upon electricity markets and transmission grids. Supporters of the plan hope that PPP will increase security of supply, reduce the cost of electricity, and attract foreign investment. PPP calls for the creation of a regional wholesale electricity market, the Mercado Electrico Regional (MER); construction of the Sistema de Interconexion Electrica de los Paises America Central (SIEPAC), an 1,100-mile transmission line linking Panama, Costa Rica, Honduras, Nicaragua, and El Salvador; and the construction of interconnectors connecting Mexico, Belize, and Guatemala with the SIEPAC.

The first phase of the plan is the completion of the SIEPAC, and the member countries created an independent company, Empresa Propietaria de la Red (EPR), to achieve this goal. In 2006, Guatemala began construction on a portion of the SIEPAC that will extend into Mexico, while Instalaciones Inabensa began work on the SIEPAC in Panama. The Inter-American Development Bank is funding the majority of the project ($170 million), while Spain is funding an additional $70 million. EPR estimates that the SIEPAC development will be operational by late 2008.

Links

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International Energy Data Base

U.S. Government

CIA World Factbook

State Department Background Notes - Belize

State Department Background Notes - Costa Rica
State Department Background Notes - El Salvador
State Department Background Notes - Guatemala
State Department Background Notes - Honduras
State Department Background Notes - Nicaragua
State Department Background Notes - Panama

Associations and Institutions
Central American Bank for Economic Integration
Empresa Propietaria de la Red (EPR)
Inter-American Development Bank
Secretaría de Integración Económica Centroamericana
Secretaría General del Sistema de la Integración Centroamericana
World Bank-country pages

Foreign Government Agencies
Central Bank of Guatemala
Comisión Nacional de Energía
Dirección General de Hidrocarburos
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Instituto Nacional de Electrificación (INDE)
Instituto Nicaragüense de Energía (INE)
Ministry of Environment and Energy
La Comisión Nacional de Energía Electrica
Ministerio de Energía y Minas

Oil and Natural Gas
Empire Energy Corporation International
Infinity Inc.
Panama Canal Authority
Petroterminal de Panama
Refinadora Costarricense de Petróleo

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Belize Electricity Limited (BEL)
Centro Nacional de Despacho de Carga
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Contact Info

cabs@eia.doe.gov
(202)586-8800
cabs@eia.doe.gov